STA-PB-A0031
(BlueW_2310 PCI version)
Bluetooth v2.0 + EDR and Wifi 802.11 b/g
PCI Combo Card

User's Manual

太 欣 半 導 體 股 份 有 限 公 司
SYNTEK Semiconductor Co., Ltd.

➢ Before installation

Requirement environments:

• Windows Vista / Vista-64 / XP sp2 / XP-64 / 2000 sp4 or above

• A minimum of 50 MB of available hard disk space for installing the drive

• An 802.11a, 802.11b, or 802.11g Access Point (for Infrastructure Mode) or another Wireless Card (for Ad-Hoc Mode). Also, the STA-PB-A0031 can compatible with most 802.11n AP router.

• One empty Available PCI slot

• CD-ROM Drive (for Driver installation only)

➢ Package Contents Check

- ✓ STA-PB-A0031 PCI Adapter x 1
  - ✧ Software CD x 1 include
    - ◆ User Manual
    - ◆ IVT BlueSoleil Bluetooth software and driver
    - ◆ 3DSP WLAN windows software and driver
  - ✧ This Quick Setup Guide x 1
  - ✧ Warranty Card x 1

Please informs your dealer if there are any missing or damaged parts

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1. Introduction

The SYNTEK **STA-PB-A0031** product provides the highest level of integration and most aggressive BOM cost by integrating IEEE 802.11b/g and Bluetooth v2.0 + EDR into a single MAC/Baseband chip utilizing a single 2.4GHz transceiver. Integrated on-chip power amplifier and LNA reduce external component count, while still able to deliver ample transmit power for most applications.

Different from any other wireless LAN and Bluetooth chip set vendor, **SYNTEK and 3DSP** uses its patented Software Radio technology to implement both wireless LAN and Bluetooth in software. The highly optimized software radio DSP technology enables **STA-PB-A0031** to integrate class 1 Bluetooth v2.0 + EDR function without any added cost to the total solution. No extra antenna, PA, RF transceiver,

resistor, capacitor, crystal or any components are needed. The software solution even guarantees the Bluetooth RF performance if the wireless LAN performance is tested to be good. It eliminates the need for system manufacturers to separately test the module's Bluetooth RF performance, therefore reduce the testing time and cost.

The **STA-PB-A0031** utilizes 3DSP's patent pending technologies to fundamentally solve the interference and performance issues existed during 802.11b/g and Bluetooth coexistence, thus improving both 802.11b/g and Bluetooth performance and link stability in real environment. As a result, it enhances user experience in a totally wireless environment, where all devices are connected wirelessly through either Bluetooth link or 802.11b/g link.

The single installation package allows for easy setup and configuration of both 802.11b/g and Bluetooth devices. Combined user interface is intuitive to use. Once configured, both wireless links operate transparently in the background.

2. Product Features

[WiFi]

- ✓ Data Rate up to 54Mbps.
- ✓ Single-band 2.4-GHz 802.11b/g with Bluetooth v2.0 + EDR
- ✓ RF IC integrated on-chip PA capable of delivering 20dBm output power
- ✓ Low active transmit and receive power dissipation and ultra-low power in stand-by and idle modes
- ✓ Supports IEEE 802.11 b/g

Security:

- ✓ WPA and WPA2 for advanced authentication and encryption
- ✓ AES and TKIP in hardware for reduced power dissipation and encryption speed
- ✓ Worldwide regulatory support
- ✓ Patent pending technology maximizes multimedia streaming performance over Bluetooth over WLAN in coexistence mode
- ✓ Patent pending Software Radio technology allows single radio, single baseband integration of multiple standards
- ✓ Advanced network security features include WPA, WPA2, 802.11i and 802.11x
- ✓ Long and short preamble supported

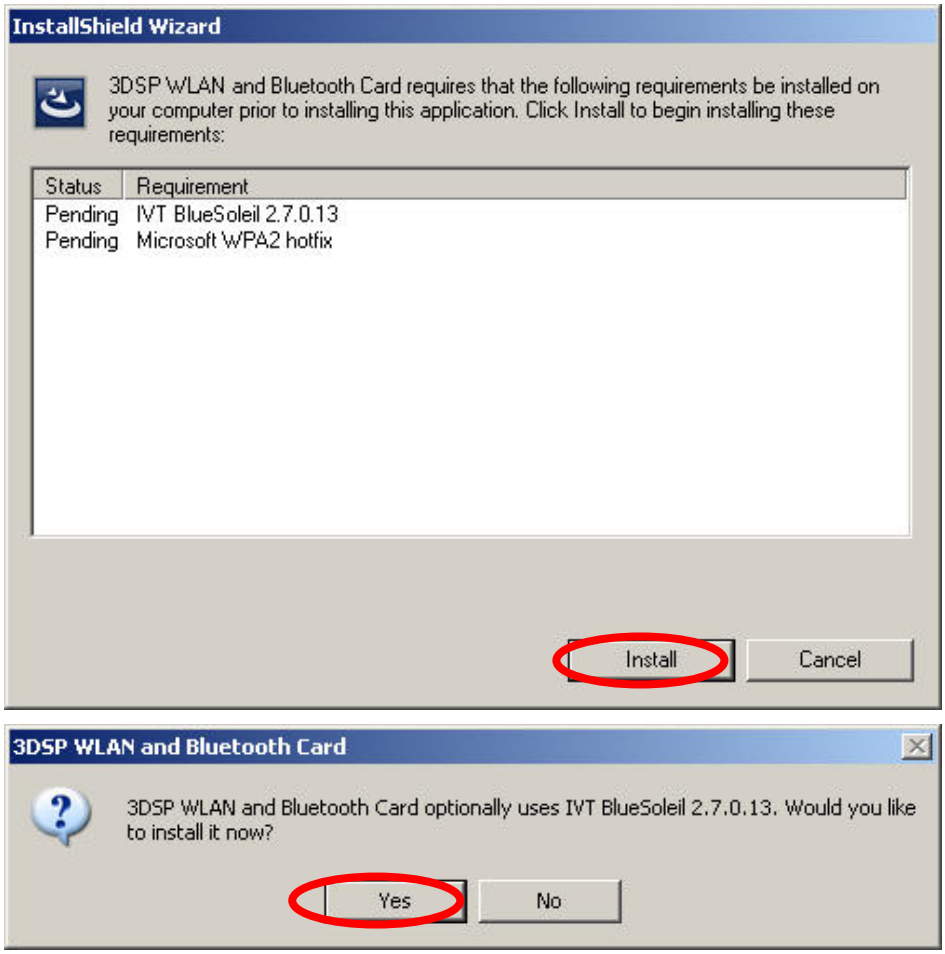
[Bluetooth]

- ✓ Support AFH (Adaptive Frequency Hopping)
- ✓ Support Bluetooth **v2.0 + EDR**
- ✓ Backward compatible with Bluetooth **v1.1** and **v1.2**
- ✓ Support for up to seven active Bluetooth devices
- ✓ Class 1 with 18dbm PA, 100m range

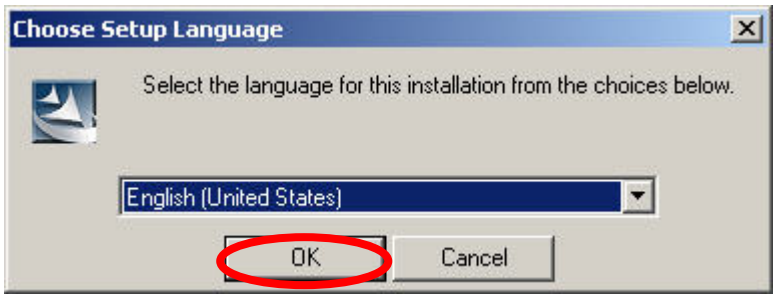
3. Install the Drivers and Utilities

1. Insert the Installation Software CD into CD-ROM drive. If the Auto-Run function of CD-ROM is disabled, you can utilize the Windows Explorer to browse CD content and run **Setup.exe** manually.
   If the Auto-Run function of CD-ROM is enabled (in Windows, the default setting of this function is usually enabled), then a CD menu will appear automatically.

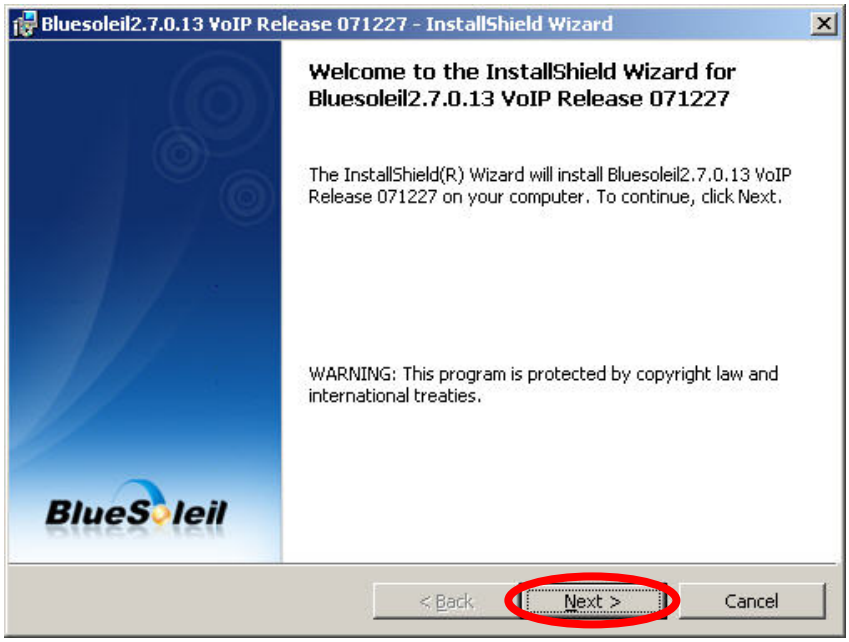
2. The Instillation program before install 3DSP Wireless driver, the installation program will install the requirement program "IVT BlueSoleil" and "Microsoft WPA2 hot fix" (This is not necessary in many PCs if installed) . The program will install IVT BlueSoleil first. Please press the "Yes" button start install BlueSoleil.


InstallShield Wizard
3DSP WLAN and Bluetooth Card requires that the following requirements be installed on your computer prior to installing this application. Click Install to begin installing these requirements:
Status
Requirement
Pending
IVT BlueSoleil 2.7.0.13
Pending
Microsoft WPA2 hotfix
Install
Cancel
3DSP WLAN and Bluetooth Card
3DSP WLAN and Bluetooth Card optionally uses IVT BlueSoleil 2.7.0.13. Would you like to install it now?
Yes
No

3. Select the Language you want to installation from the combo box, and then press the "OK" button to continue.

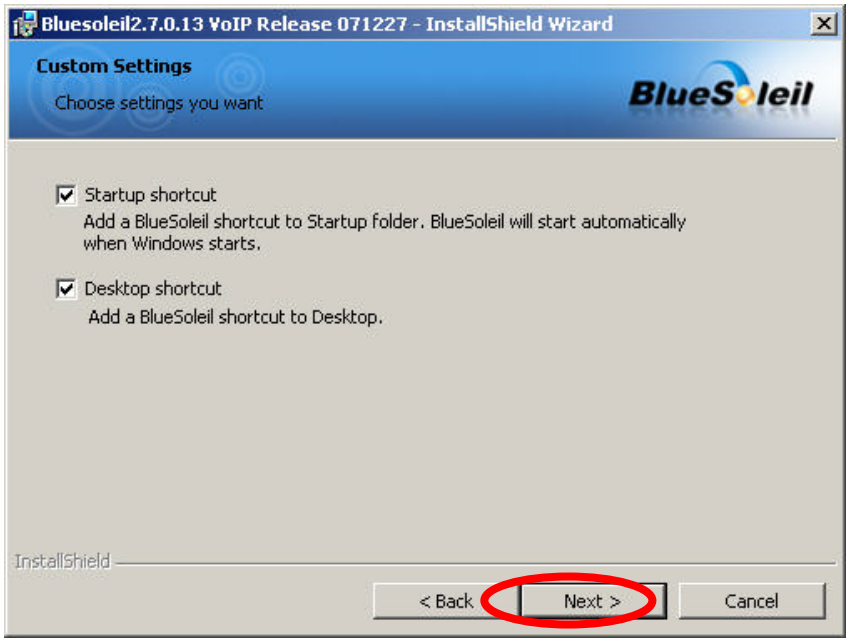


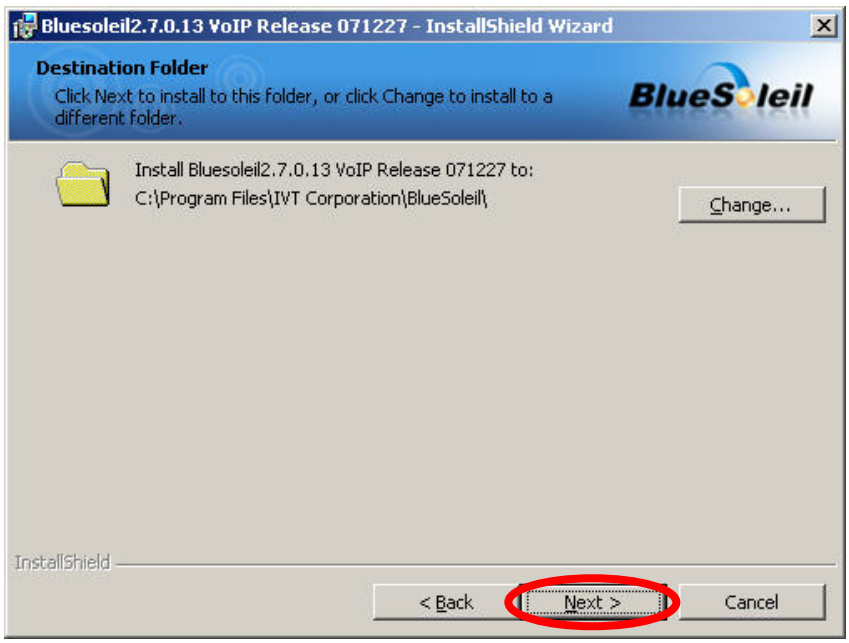
4. Please click *Next* button several times to continue the software installation. In the *License Agreement* window, please read license agreement carefully. Select "I accept the terms in the license agreement" then click "Next" button to continue.


Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
Welcome to the InstallShield Wizard for Bluesoleil2.7.0.13 VoIP Release 071227
The InstallShield(R) Wizard will install Bluesoleil2.7.0.13 VoIP Release 071227 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
BlueSoleil
< Back
Next >
Cancel

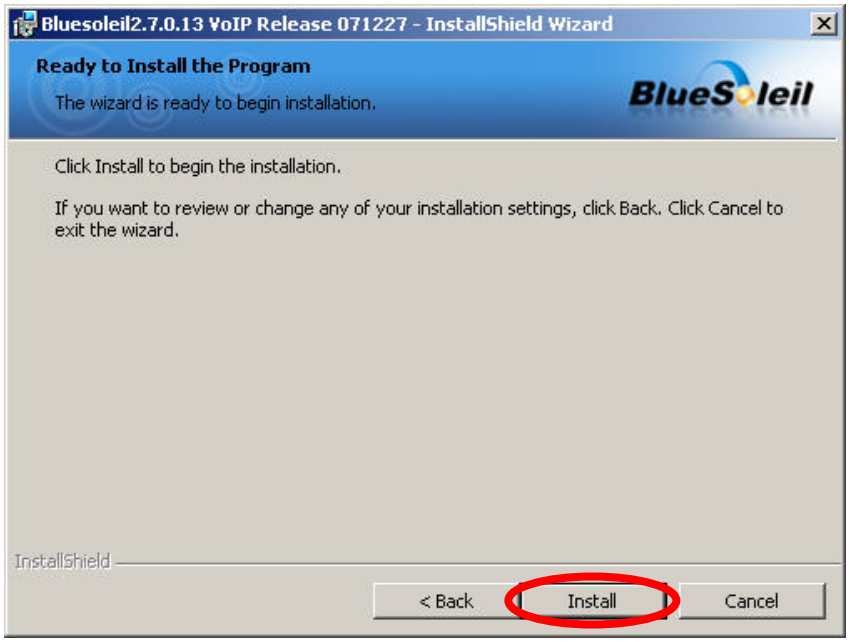
Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
BlueSoleil
Bluesoleil End User License Agreement
NOTICE TO USER: PLEASE READ THIS AGREEMENT CAREFULLY. THE BLUESOLEIL END USER LICENSE AGREEMENT (AGREEMENT) IS A VALID AND BINDING AGREEMENT BETWEEN YOU, AS A USER, AND IVT CORPORATION (IVT). BY USING ALL OR ANY PORTION OF THE SOFTWARE, YOU ACCEPT ALL THE TERMS AND CONDITIONS
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

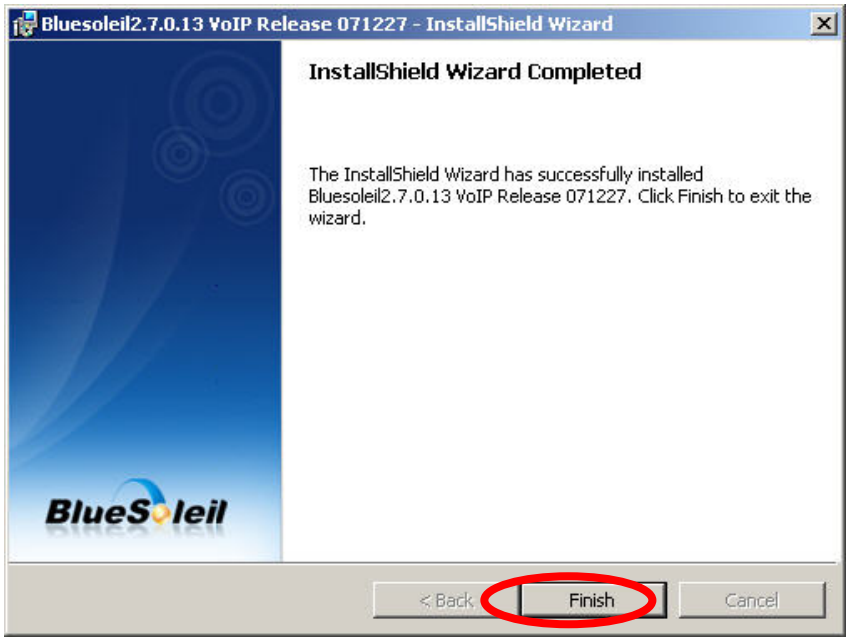
5. Select you want to place the program shortcut, and indicate the location of where you want Bluetooth Software to be stored; if you do not change the default settings, it will be stored under **C:\Program Files\IVT Corporation\BlueSoleil** (Recommended). Click on "*Next*" button to continue. Or you can select your prefers location to install. After finish, the installation program is ready for install.


Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
Custom Settings
Choose settings you want
BlueSoleil
Startup shortcut
Add a BlueSoleil shortcut to Startup folder. BlueSoleil will start automatically when Windows starts.
Desktop shortcut
Add a BlueSoleil shortcut to Desktop.
InstallShield
< Back
Next >
Cancel

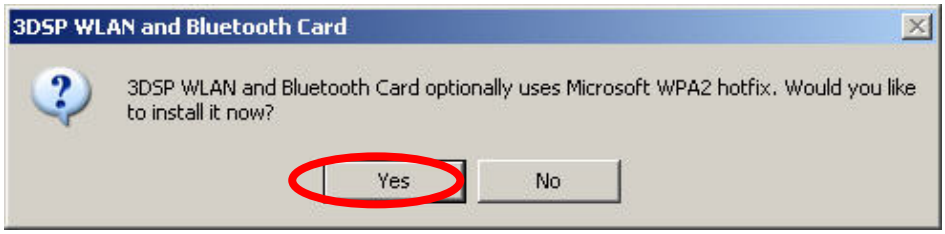

Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
BlueSoleil
Install Bluesoleil2.7.0.13 VoIP Release 071227 to:
C:\Program Files\IVT Corporation\BlueSoleil\
Change...
InstallShield
< Back
Next >
Cancel

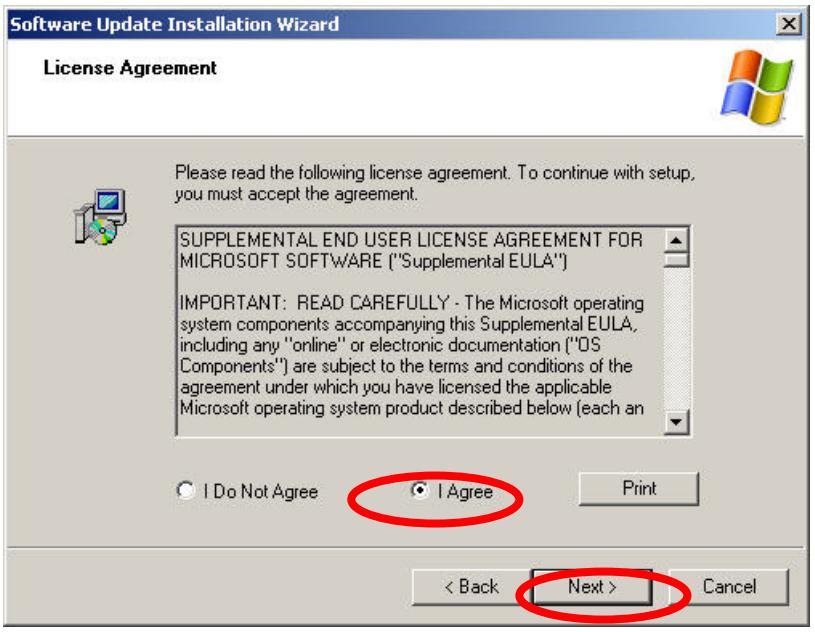
6. The Install Shield Wizard will begin to install the software and copy files to your hard disk. After copy all the files, the installation will try to install virtual Bluetooth device in your system. It may take a few minutes, please wait it finishes the installation.

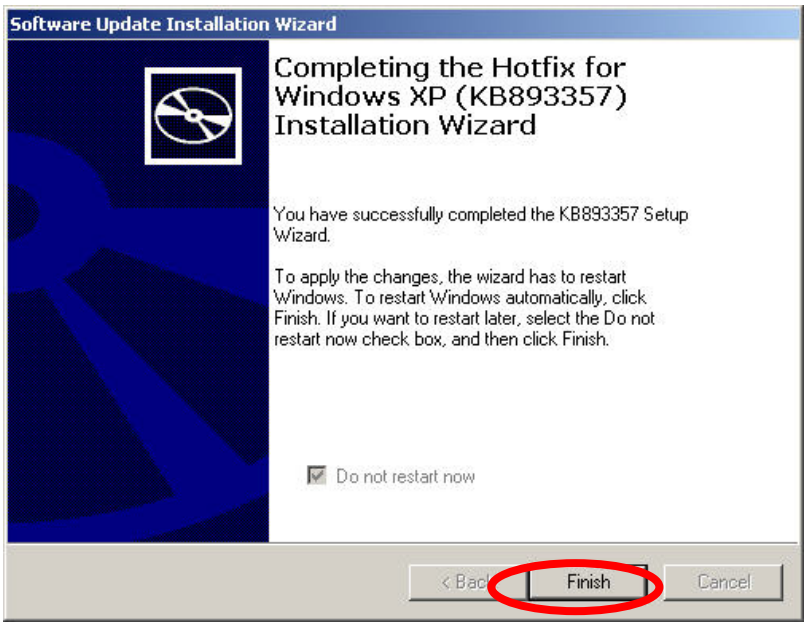

Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
BlueSoleil
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel


Bluesoleil2.7.0.13 VoIP Release 071227 - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Bluesoleil2.7.0.13 VoIP Release 071227. Click Finish to exit the wizard.
BlueSoleil
< Back
Finish
Cancel

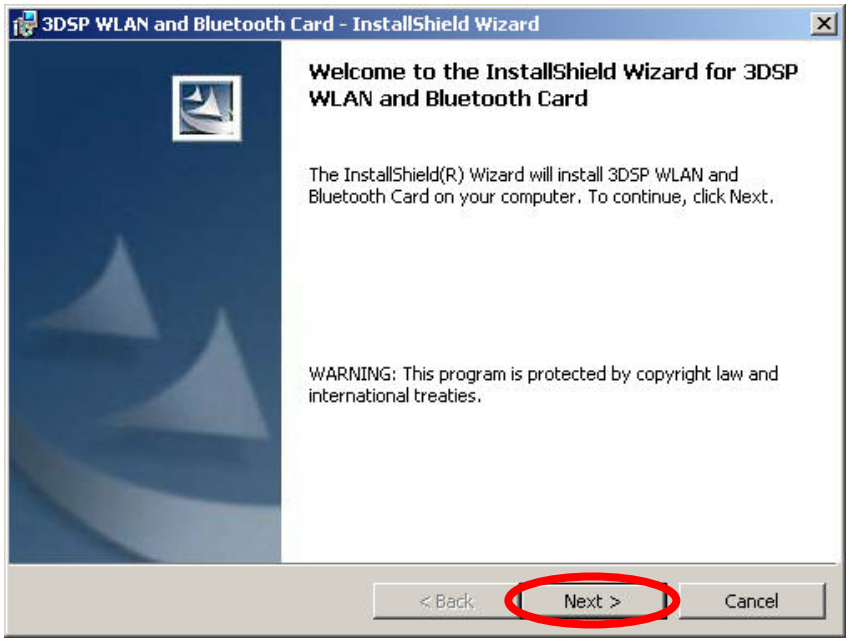
7. After finish installation the IVT Bluesoleil, then the install system will continue install. If your system is not install the WPA2 hotfix yet. The install program will ask you install it first.


3DSP WLAN and Bluetooth Card
3DSP WLAN and Bluetooth Card optionally uses Microsoft WPA2 hotfix. Would you like to install it now?
Yes
No

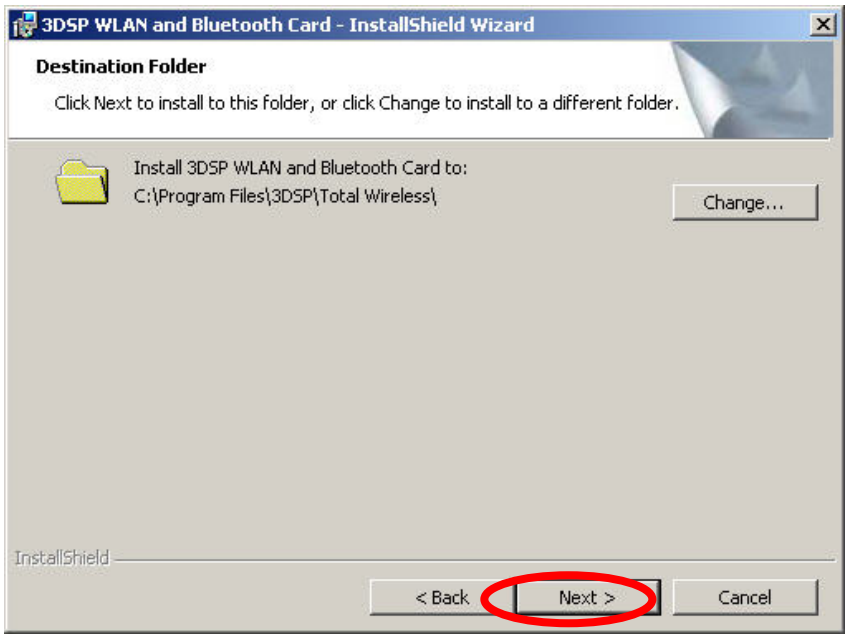

Software Update Installation Wizard
License Agreement
Please read the following license agreement. To continue with setup, you must accept the agreement.
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE ("Supplemental EULA")
IMPORTANT: READ CAREFULLY - The Microsoft operating system components accompanying this Supplemental EULA, including any "online" or electronic documentation ("OS Components") are subject to the terms and conditions of the agreement under which you have licensed the applicable Microsoft operating system product described below (each an
I Do Not Agree
I Agree
Print
< Back
Next >
Cancel


Software Update Installation Wizard
Completing the Hotfix for Windows XP (KB893357) Installation Wizard
You have successfully completed the KB893357 Setup Wizard.
To apply the changes, the wizard has to restart Windows. To restart Windows automatically, click Finish. If you want to restart later, select the Do not restart now check box, and then click Finish.
Do not restart now
< Back
Finish
Cancel

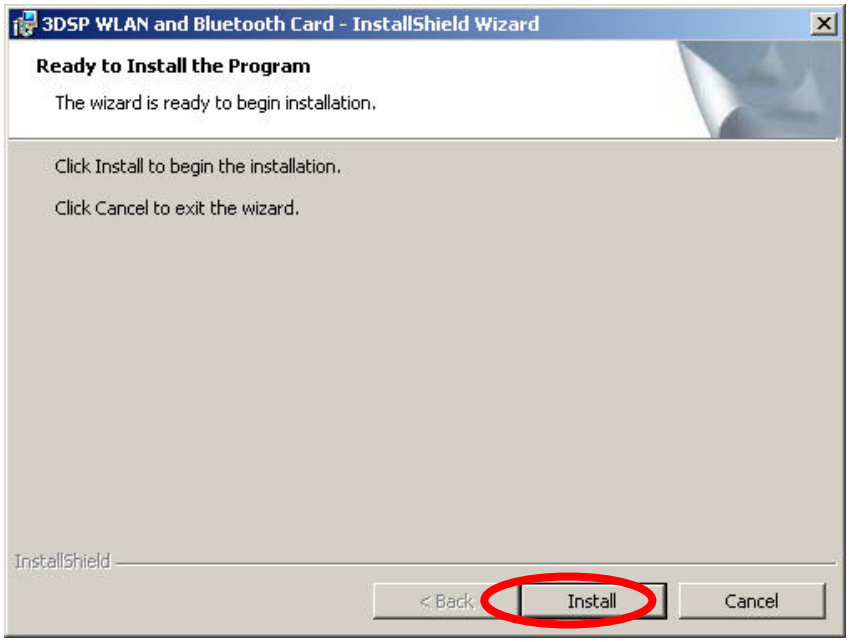
8. Please click "*Next*" button several times to continue the software installation. In the *License Agreement* window, please read license agreement carefully, then click "Yes" button to continue.


3DSP WLAN and Bluetooth Card - InstallShield Wizard
Welcome to the InstallShield Wizard for 3DSP WLAN and Bluetooth Card
The InstallShield(R) Wizard will install 3DSP WLAN and Bluetooth Card on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

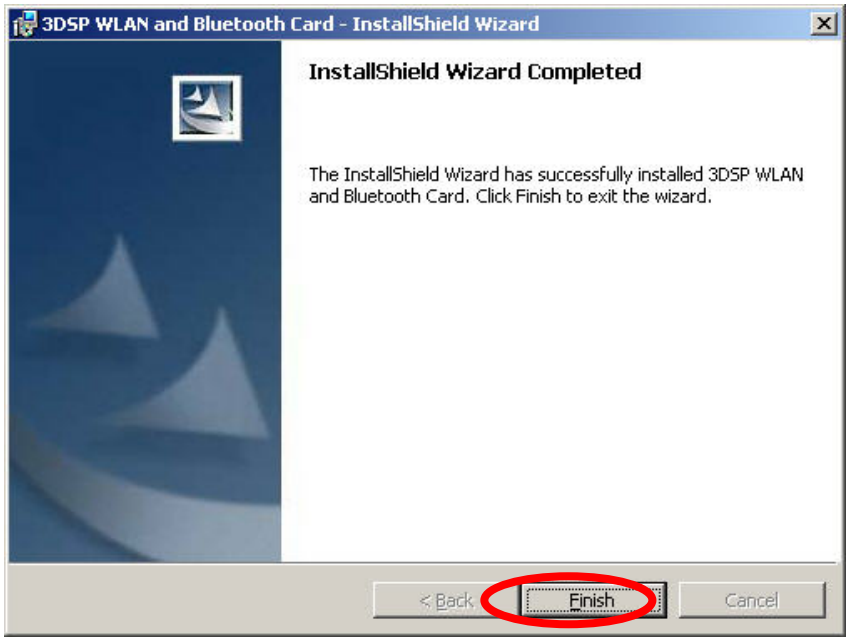
9. Indicate the location of where you want 3DSP WLAN driver to be stored; if you do not change the default settings, it will be stored under **C:\Program Files\3DSP\Total Wireless** (Recommended). Click on *Next* button to continue. Or you can select your prefers location to install.

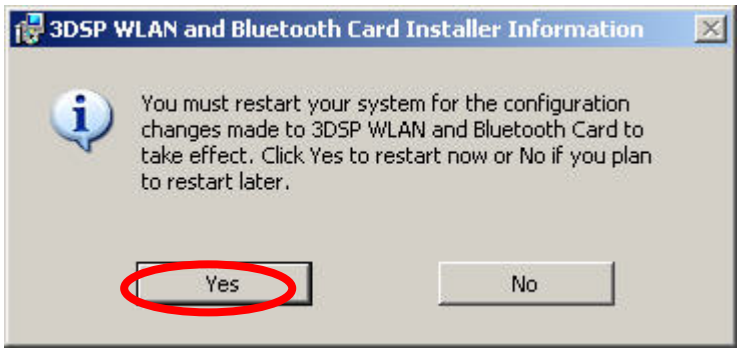

3DSP WLAN and Bluetooth Card - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install 3DSP WLAN and Bluetooth Card to:
C:\Program Files\3DSP\Total Wireless\
Change...
InstallShield
< Back
Next >
Cancel

10. The Install Shield Wizard will begin to install the software and copy files to your hard disk. After copy all the files, the installation will try to install virtual Bluetooth device in your system. It may take a few minutes, please wait it finishes the installation.


3DSP WLAN and Bluetooth Card - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

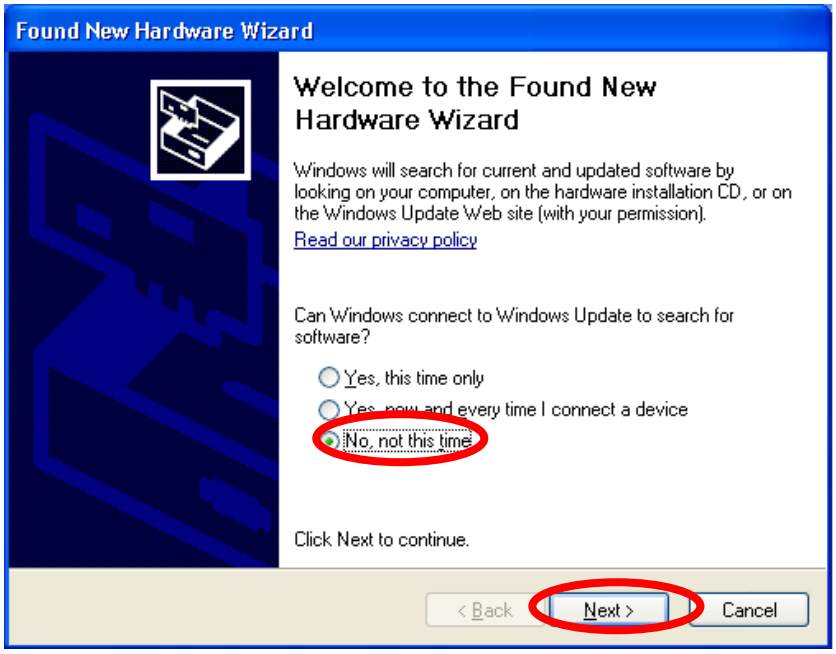
11. After finish installation, please select reboot your system to finish the installation. Or you can select to reboot later.


3DSP WLAN and Bluetooth Card - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed 3DSP WLAN and Bluetooth Card. Click Finish to exit the wizard.
< Back
Finish
Cancel

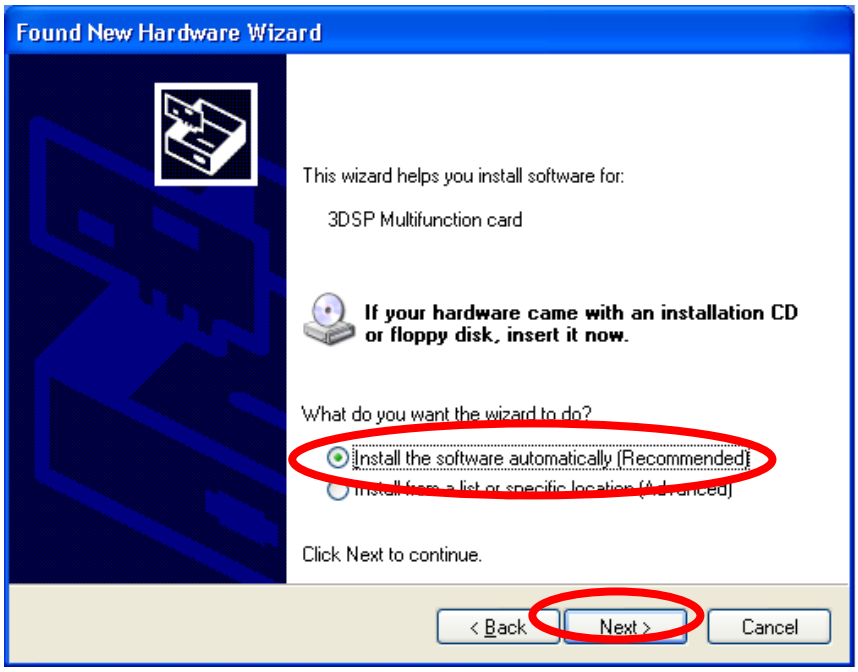

3DSP WLAN and Bluetooth Card Installer Information
You must restart your system for the configuration changes made to 3DSP WLAN and Bluetooth Card to take effect. Click Yes to restart now or No if you plan to restart later.
Yes
No

12. After shut-down your computer, Please Install the STA-PB-A0031 PCI card in your PC mother board. After install the card appropriately. Then restart your PC system.

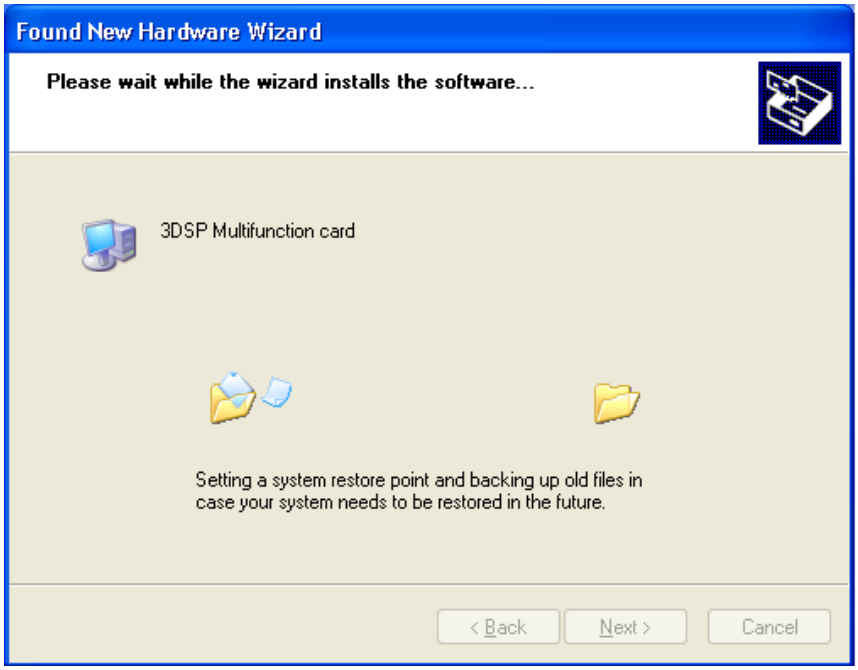
13. After into the windows system, a "Found New Hardware" message will appear in your system tray briefly, as shown in the following image.

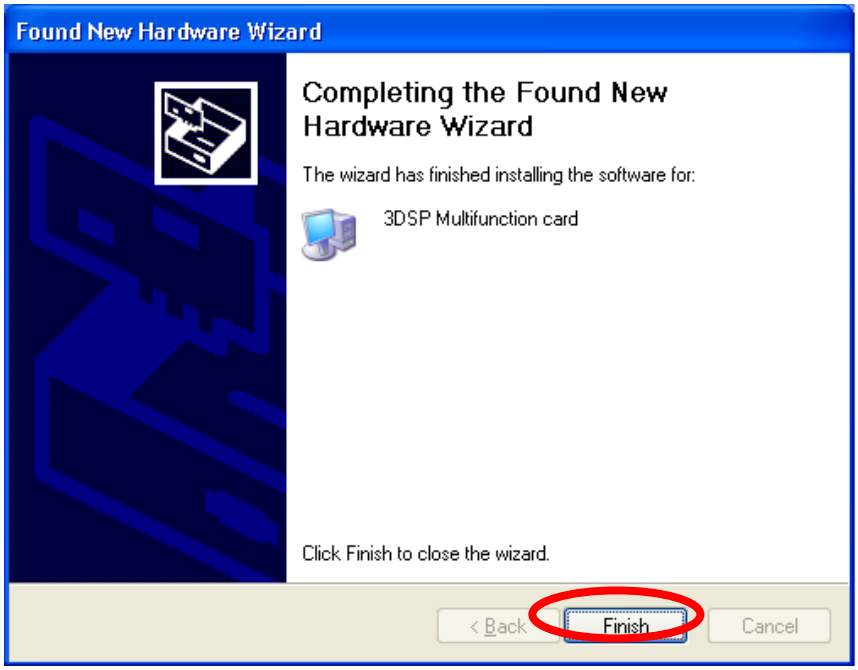

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

14. The screen on the left appears. Select No, not this time, and click "Next".


Found New Hardware Wizard
This wizard helps you install software for:
3DSP Multifunction card
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Click Next to continue.
< Back
Next >
Cancel

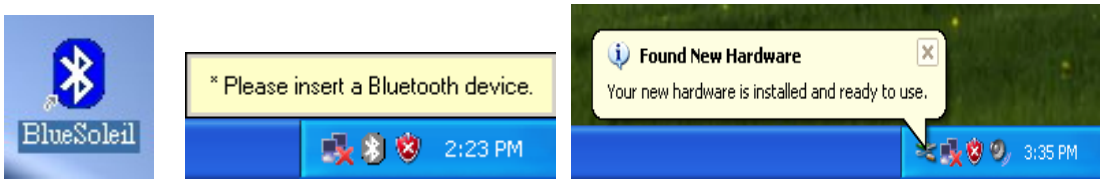
Click **Next**.


Found New Hardware Wizard
Please wait while the wizard installs the software...
3DSP Multifunction card
Setting a system restore point and backing up old files in case your system needs to be restored in the future.
< Back
Next >
Cancel



Press "Finish" for finish the driver and programs installation.

15. There are two new Bluetooth icons appear on the desktop and the windows task bar respectively when logged in Windows operating system. For more information on the BlueSoleil, please refer to Chapter 2.



16. After a few seconds, another "Found New Hardware" message will appear briefly, as shown on the fallowing pictures.

A Bluetooth icon will appear in your system tray

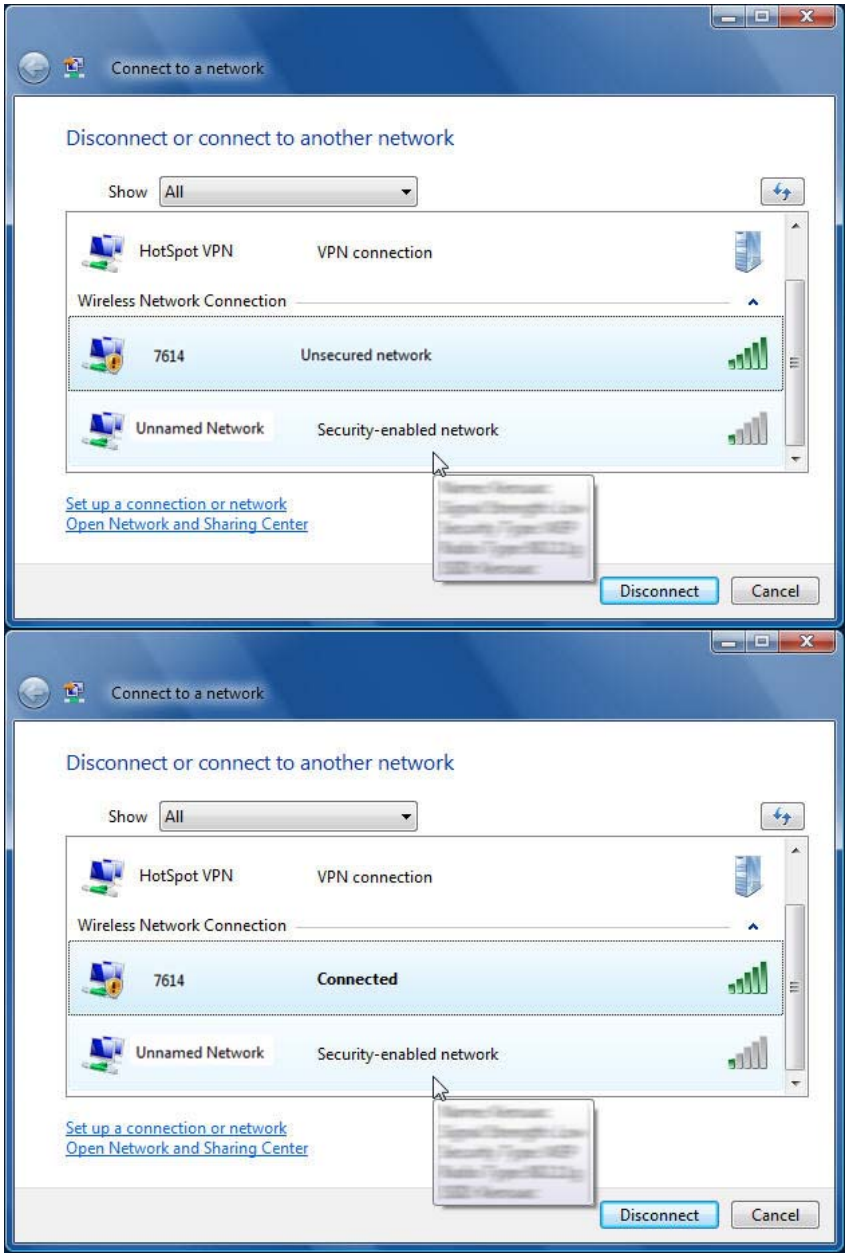
4. Wireless Configuration

4.1 Configuring Your Wireless Network with Windows XP

The Windows XP SP2 or above operating system has the "Wireless Zero Configuration" feature, which can be used to configure and control the STA-PB-A0031 IEEE 802.11 b/g and Bluetooth v2.0 + EDR Combo Module. Wireless Zero Configuration is most appropriately used in home and small office networks and in ad hoc networks. Wireless Zero Configuration should not be used in medium or large networks or in the networks where a high degree of security is required.

Follow these steps to configure your Wireless combo Module using Wireless Zero Configuration:

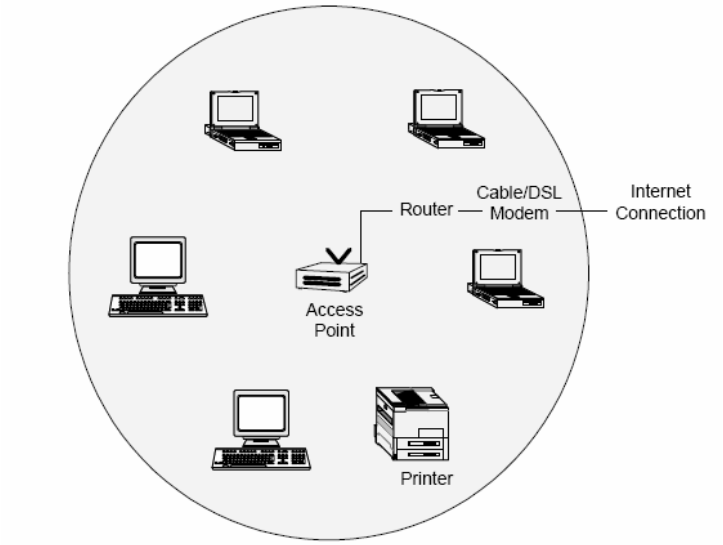
1. From the Start menu, select Control Panel.
2. Click Network Connections.
3. Right-click the network connection associated with your Wireless Combo Module and select Properties.
4. Click the Wireless Networks tab.
5. Check the Use Windows to configure my wireless network settings checkbox.
6. Click the View Wireless Networks button.
7. Select the Access Point with which you want to connect.
8. Click the Connect button.
9. Type in a network key.



Follow these steps to start Wireless Zero Configuration:

1. From the Start menu, select Run. Enter **services.msc**.
2. Scroll down to Wireless Zero Configuration Service. Double-click on it to open the settings box.
3. Click the Start button to start the service.
4. Set the Startup type drop-down box to automatic.
5. Insert your wireless PCI Module. Windows XP will configure it for you.

4.2 Single Access Point Network

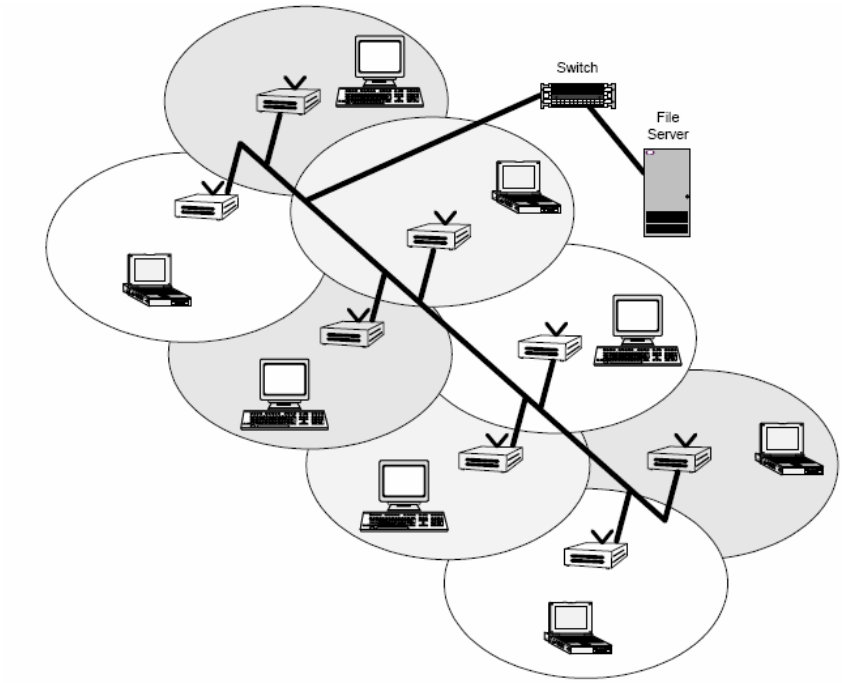


In a small environment, you can set up a wireless network using a single Access Point and one or more Wireless PCI Module. This type of network provides a coverage area sufficient to satisfy the network requirements for many homes and small businesses. The Access Point connects your network computers to an existing network. Once this "**infrastructure**" is in place, you can easily add computers to the network by simply configuring the Wireless PCI Module in those computers. This eliminates the time and expense of running costly cables throughout your network. Notebook users are now free to roam from office to conference room or from kitchen to outdoor patio.

To create a single Access Point network, the Access Point must be connected to a router and a cable modem or a DSL modem. This connection lets the wireless network access the wired network in your home or office and the Internet. Position the Access Point in the center of your network. If you experience a weak signal or no signal at all from an outer computer, move the computer with the Wireless PCI Module closer to the Access Point or position the Access Point closer to the computer.

Many manufacturers now offer wireless routers, which combine the Access Point and router in one box. Note that the Access Point and PCI Modules must have the same security settings to communicate. The Wireless PCI Module supports all types of Access Points, including 802.11b and 802.11g.

4.3 Multiple Access Point Network

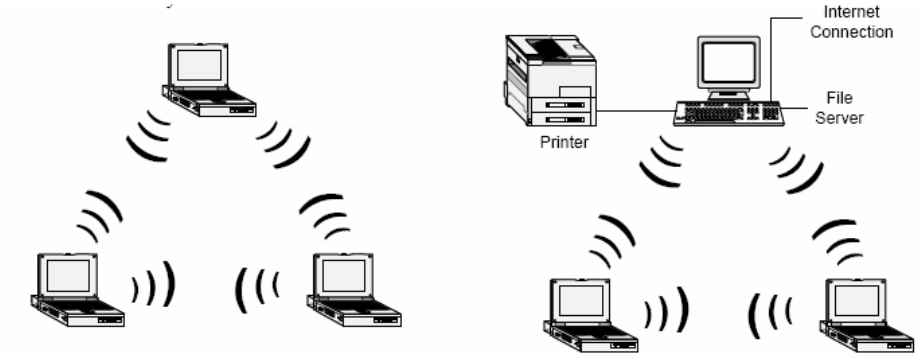


In a large environment, you can set up a wireless network using multiple Access Points and thereby create a large coverage area. In such a network, computers with Wireless PCI Modules that "roam" between different locations within the network area will be served by the various Access Points and maintain the same network connection. Roaming wireless stations in a multiple Access Point network will automatically switch between Access Points when necessary.

To create a multiple Access Point network, the Access Points must be connected by way of a wired backbone. Access Points must overlap to ensure complete connection coverage for the roaming client. Note that all the Access Points and PCI Modules must have the same security settings to communicate.

The Wireless PCI Module supports roaming between all types of Access Points, including 802.11b and 802.11g.

4.4 Setting Up a Peer-to-Peer Network



A Peer-to-Peer Network consists of two or more notebook or desktop computers with Wireless PCI card that communicate directly to each other without the use of an Access Point. Such networks are usually small but they can be very useful. Co-workers can quickly set up a Peer-to-Peer group in a temporary environment. If there is a printer nearby that is equipped with a wireless device, the members of the Peer-to-Peer group can send print files to that printer. In addition, if one member of the group is connected to an Infrastructure Network (one that uses an Access Point), all the members of the Peer-to-Peer group can access network storage devices and the Internet, provided that their computers have been set up with the necessary software.

In wireless-LAN literature, Peer-to-Peer Networks is sometimes referred to as Ad Hoc Networks. Both terms mean exactly the same thing. The original term was Ad Hoc (from the Latin "to this"). Ad hoc means done or set up solely in response to a particular situation or problem. Because of the vagueness introduced by the Latin term, some manufacturers have been using the more descriptive term "Peer-to-Peer". Peer-to-Peer Networks are used far less widely than Infrastructure Networks. Perhaps that is because users have not learned the simple steps to set up a Peer-to-Peer Network. One person in the group has to create a profile with a Network Name (**SSID**) and other simple settings. After you create the profile, you can communicate that Network Name (**SSID**) to the other people in your group. They will see the Network Name on their Site Survey screen and connect to the network. These are the steps that the first person, the person who is creating the network, must do on the Connection Profile screen.

1. Enter a unique Profile Name and Network Name (**SSID**).
2. Select the Peer-to-Peer radio button.
3. In the Network Type pull-down menu, select the network type that matches all the

WiFi device in your Peer-to-Peer Group (**802.11b and 802.11g**).
4. Establish the Privacy settings that all the computers in the network will be using. Remember that if you need to enable encryption in your network, the other computers in the network will need the encryption key.
To share an Internet connection, you will need to purchase Internet Sharing Software or use the Internet Connection Sharing (**ICS**) utility provided with Windows XP.

4.5 Wireless Performance Considerations

Many factors determine the range, coverage, and transmission rate of wireless components (Access Points and Wireless PCI Module). Be aware of the following:

- ✧ When a radio signal travels through building materials such as walls, floors, concrete, and metal framing, its strength is reduced. The best performance is achieved when wireless components are in direct line-of-sight with one another. A wall may be six inches thick, but if two wireless components form an acute angle to the wall, the wall may appear to be three feet thick to the radio wave.
- ✧ Place wireless components away from cordless telephones, microwave ovens, printers, and monitors. Cordless telephones and other devices that operate in the 5 GHz frequency range can interfere with wireless transmission. The 2.4 GHz spectrum might be occupied by microwave ovens, cordless telephones, and Bluetooth devices.
- ✧ Increasing the distance between wireless components significantly decreases the number of successfully transmitted packets. If you are far away from your Access Point, you cannot expect to have the same transmission rate as someone who is near the same Access Point.
- ✧ Your actual data throughput will always be less than the data rate of the device (**54 Mbps or 11 Mbps**). In addition to the considerations listed above, the data throughput is less because some of the available bandwidth is used to send control messages and to regulate the wireless traffic. After your dongle receives data, the computer processor and operating system that you are using can cause a further delay in the display of that data.

4.6 WiFi Security Considerations

Transmitting data via radio waves presents real security risks. Someone within your wireless network range could, with a fair amount of effort, access your network and the data you transmit. You might have heard about the white vans that drive slowly through neighborhoods and capture account numbers and passwords. Eavesdropping on computer networks (a.k.a. "sniffing") requires costly equipment and it is therefore unlikely that your neighbor is a real threat.

If you want to ensure the security of your data, wireless LAN technology provides different means to that end. WLAN security standards have progressed from WEP to TKIP to WPA and AES. Each stage in this progression provides users with more protection than the previous stage. Using the same type of security standard throughout the network is a necessity. You cannot configure a profile using WPA and expect to communicate with an Access Point using WEP.

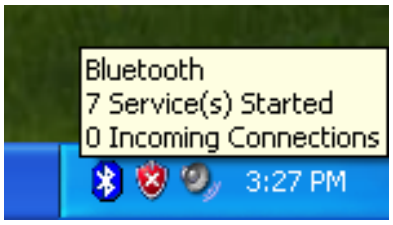
For those who want an effective security feature, the STA-PB-A0031 802.11b/g and Bluetooth v2.0 + EDR Combo PCI card support the Wired Equivalent Privacy (**WEP**) security standard. This feature uses a network key called a WEP key, which encrypts data so that it is only readable by other computers that have a matching WEP key. The WEP key must be entered and stored on each wireless device in the network. You cannot configure a profile using one WEP key and expect to communicate with an Access Point using a different WEP key. Assigning WEP keys in a large environment can be problematic for the system administrator. If an employee leaves your company, new WEP keys should be assigned to protect the network from the former employee who knows the secret key.

5. Bluetooth Configuration

5.1 Start the Bluetooth Device

Start the Bluetooth service for ready to service.

1. After you install the PCI card, the system tray Icon will become available.
If the Bluetooth Services is not start up, please start the IVT BlueSoleil program on your system. (The default will place a shortcut on the desktop)



2. Right Click the Bluetooth service tray Icon, press the ***"Display"***.

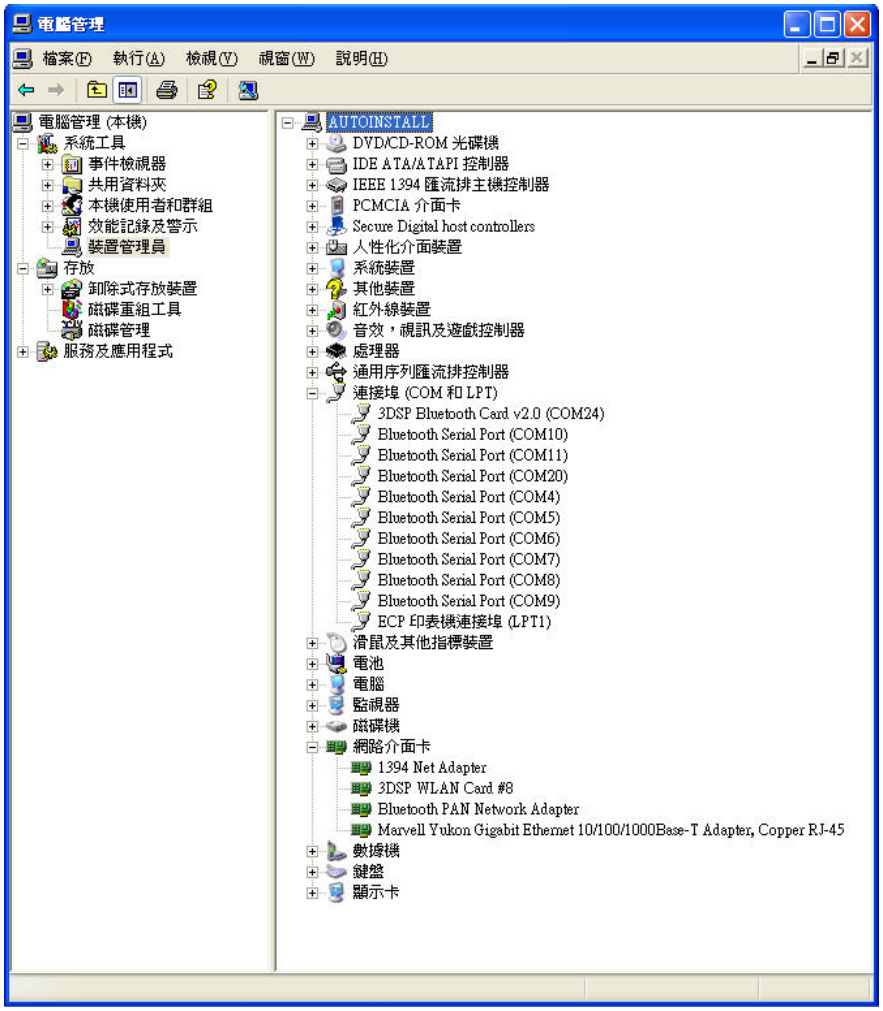
3. Give this Bluetooth service computer a name and computer type, let the other Bluetooth identify.

Welcome to Bluetooth
Welcome to Bluetooth
General
Please set your Bluetooth device name and device type. This information will be shown to other Bluetooth devices.
Device Address:
00:11:67:03:DB:65
Device Name:
EXPSP2
Device Type:
Desktop
Security
Your security level is 'Medium' now. Other Bluetooth devices must provide a Bluetooth passkey before connecting with your computer. If you do not want to have security authentication, uncheck 'Use security level Medium.'
Use security level Medium
OK

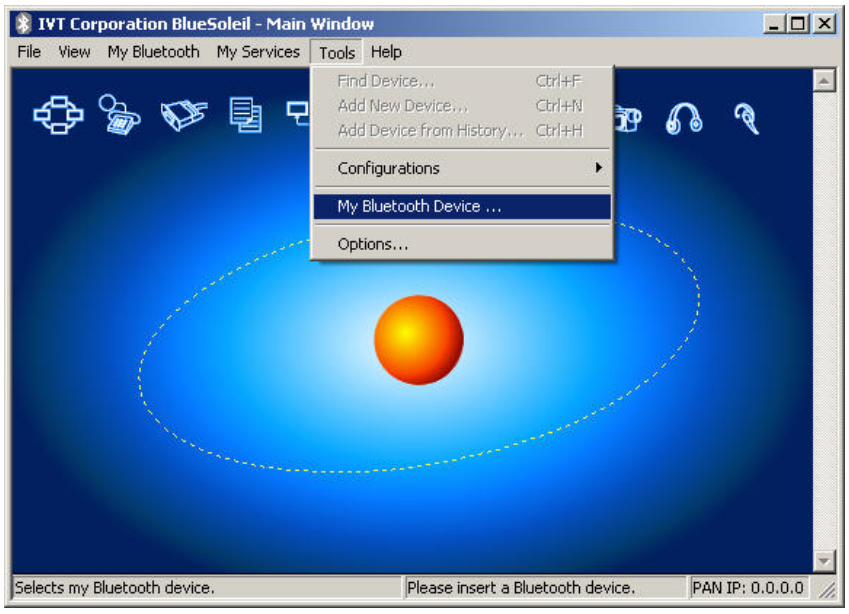
5.2 Manual Configuration Bluetooth Device

If the IVT BlueSoleil can not identify the Bluetooth device services, there you can manually configuration the IVT BlueSoleil.

a. Open the Device management of your system. [Setup] => [Windows Control Panel] => [Device Management]. The search the connection port for 3DSP Bluetooth card v2.0 (**COM X**). **X** is the **COM** port assign like the fallowing picture.

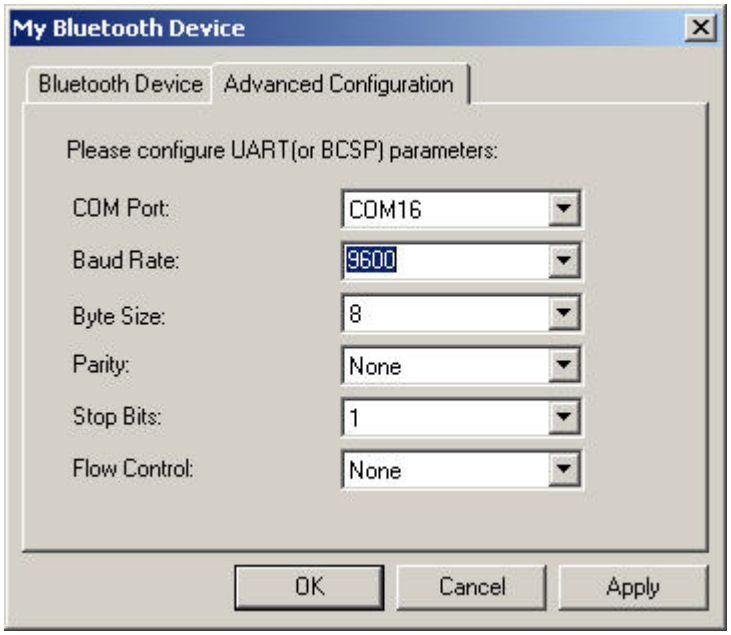


b. Start the IVT BlueSoleil, the go to [**Tool**] => [**My Bluetooth Device**].


IVT Corporation BlueSoleil - Main Window
File View My Bluetooth My Services Tools Help
Find Device... Ctrl+F
Add New Device... Ctrl+N
Add Device from History... Ctrl+H
Configurations
My Bluetooth Device ...
Options...
Selects my Bluetooth device.
Please insert a Bluetooth device.
PAN IP: 0.0.0.0

c. Set as **UART** device, and then go to the advance setup page.

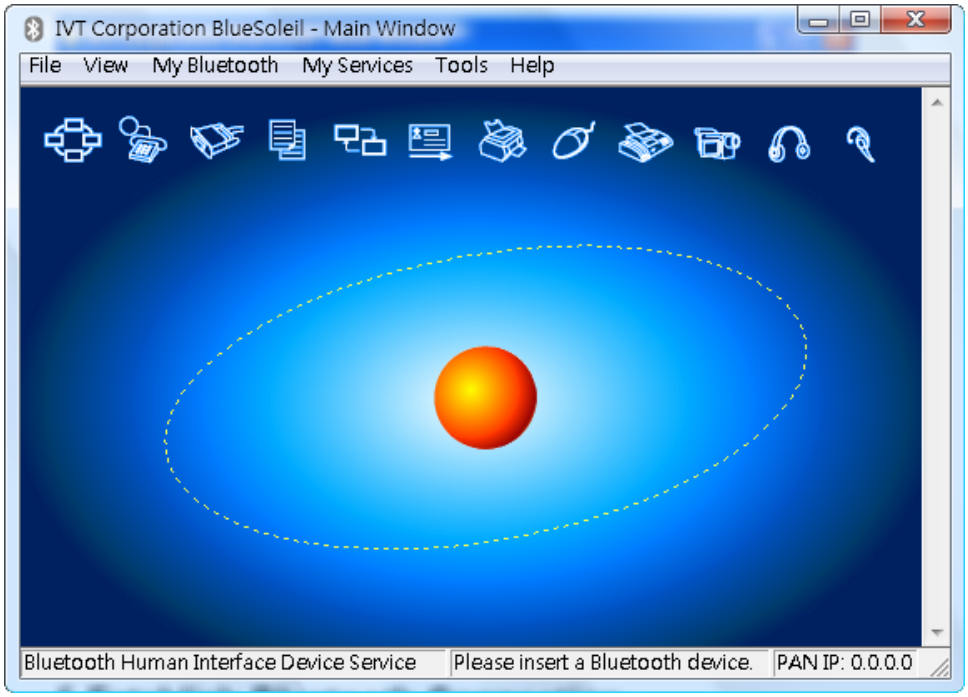
d. Configuration as the fallowing picture setting. Setup the [COM Port] [Transmit speed] [Data Bit] [Parity Check] [Stop bit] [Fallow control]. As COM Port = X that reference from the device management information. Transmit speed = 9600, Data Bit = 8, Parity Check = None, Stop bit = 1, Fallow control = none.



d. After finish setting, please "OK" for finish manually Bluetooth device configuration.

5.3 Start Bluetooth

Start BlueSoleil. (Double click the IVT Bluesoleil icon or in the Start Menu)


IVT Corporation BlueSoleil - Main Window
File View My Bluetooth My Services Tools Help
Bluetooth Human Interface Device Service
Please insert a Bluetooth device.
PAN IP: 0.0.0.0

5.4 Establish Bluetooth Connection

A connection is normally initiated from the client.

- On the server side, start the service.
- On the client side, initiate the connection.

Start Service on Server

If BlueSoleil provides service, please start the service:

1. Change to Service Window.
2. Right-click the service icon, select Start Service on the pop-up menu.

Initiate Connection on Client

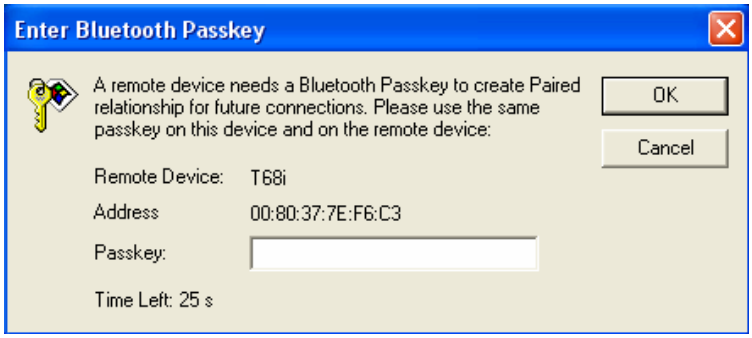
In Main Window:

1. Single click my device, the center ball, to search the Bluetooth devices in range.
2. Search the selected Bluetooth device service by double-clicking the device icon. Service button on the top of the BlueSoleil Main Window will be highlighted if the service is supported by the device. Enter the same Bluetooth passkey on both

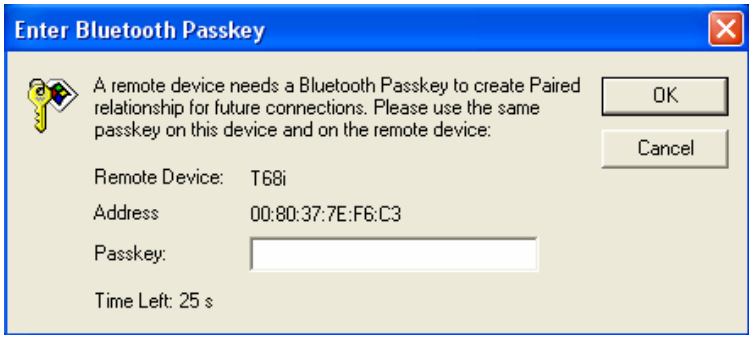
devices if necessary to pair the two devices.

3. Connect.

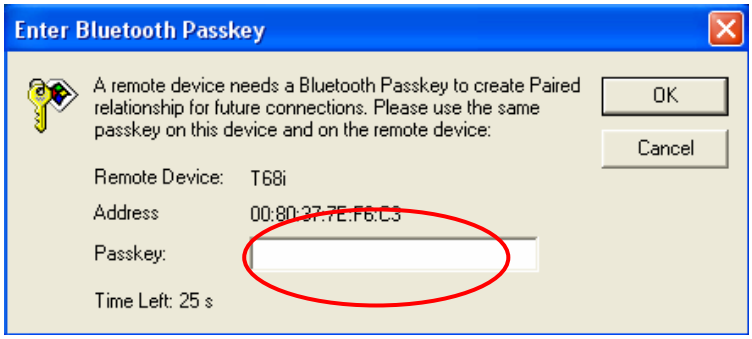
Single-click the highlighted service button to establish the connection


Enter Bluetooth Passkey
A remote device needs a Bluetooth Passkey to create Paired relationship for future connections. Please use the same passkey on this device and on the remote device:
OK
Cancel
Remote Device: T68i
Address 00:80:37:7E:F6:C3
Passkey:
Time Left: 25 s

4. If the other device needs pair, the Bluetooth Icon in the system tray will show a warning massage that the Bluetooth connection need input pair numbers.


Enter Bluetooth Passkey
A remote device needs a Bluetooth Passkey to create Paired relationship for future connections. Please use the same passkey on this device and on the remote device:
OK
Cancel
Remote Device: T68i
Address 00:80:37:7E:F6:C3
Passkey:
Time Left: 25 s

5. Input **the same pair number** as you input in the other Bluetooth device. Then click ok to finish the Bluetooth connection pair procedure.


Enter Bluetooth Passkey
A remote device needs a Bluetooth Passkey to create Paired relationship for future connections. Please use the same passkey on this device and on the remote device:
OK
Cancel
Remote Device: T68i
Address 00:80:37:7E:F6:C3
Passkey:
Time Left: 25 s

5.5 Stop the Bluetooth Device

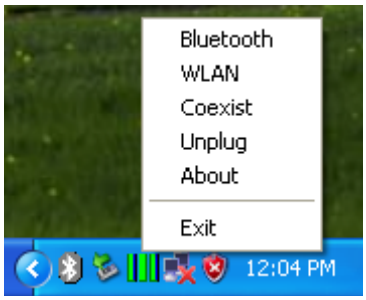
Remove the PCI card from the system. The tray bar icon will show the BlueSoleil is not available.

Figure 1-26: The Bluetooth Device is not available.

6.3DSP WLAN and Bluetooth Combo Utility Configuration

✓ Right-Click on the green three-bar icon in the system tray, a pop-up list that displays several options will appear. (Recommended)

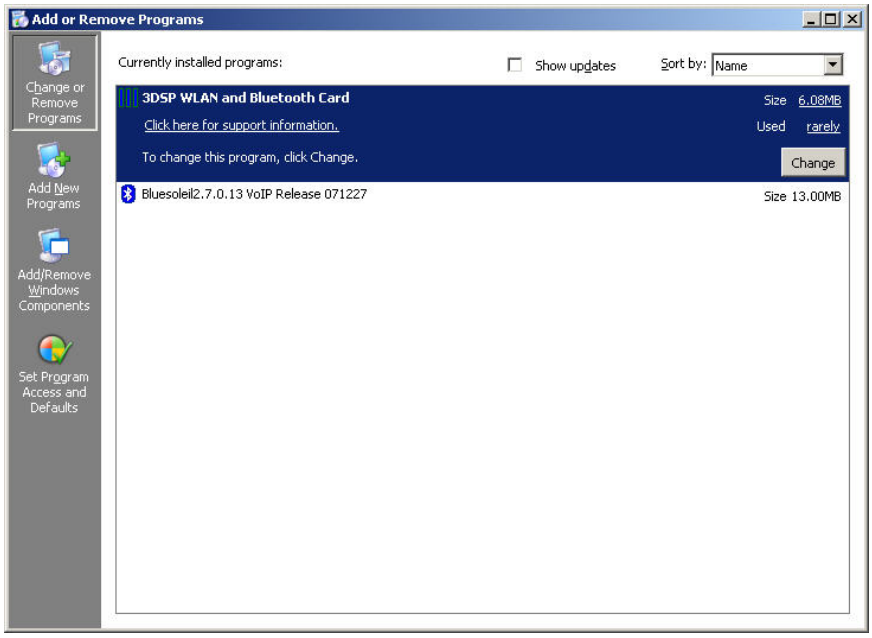
1. Click Bluetooth to open the Bluetooth utility.
2. Click WLAN to open the WLAN utility.
3. Click Coexist to use both utilities simultaneously.
4. Click Unplug to stop the utilities.



7. Driver Uninstallation

If you want to remove the wireless Combo card driver, please read this chapter for introduction.

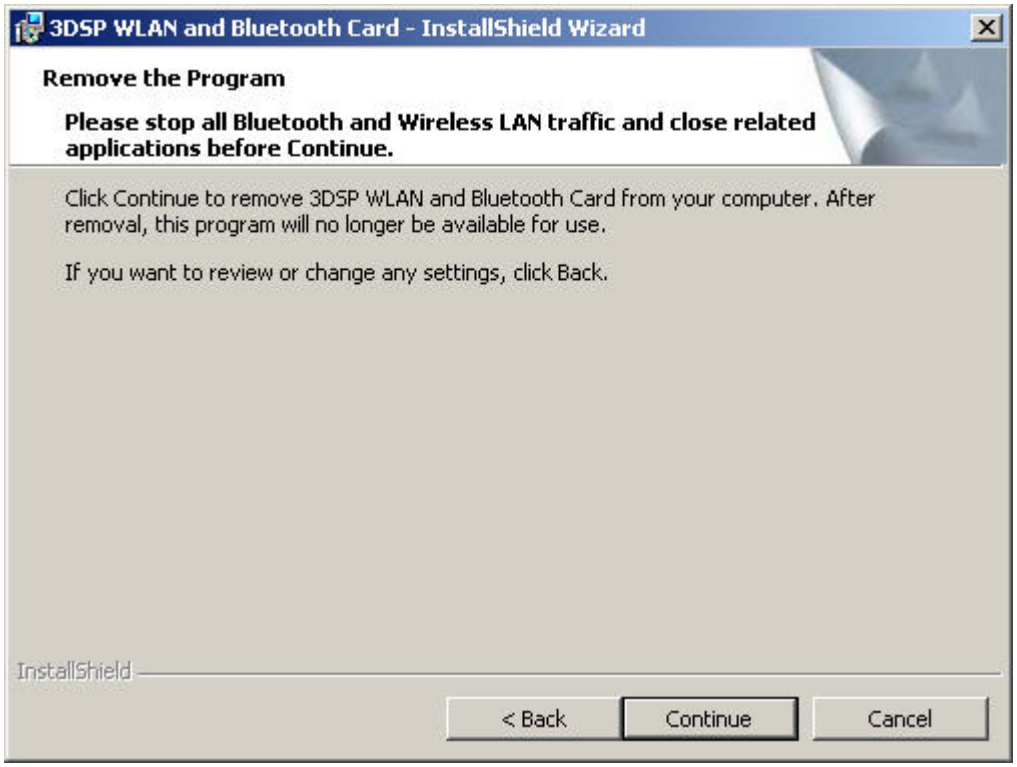
7.1 Go to Windows Control Panel, select and start "Add or remove programs" service.



7.2 Click the 3DSP WLAN and Bluetooth Card, and then press the "Change" button. The system will ask you what you want to do with this program. Select "Remove" and press the "Next" button for remove the program.

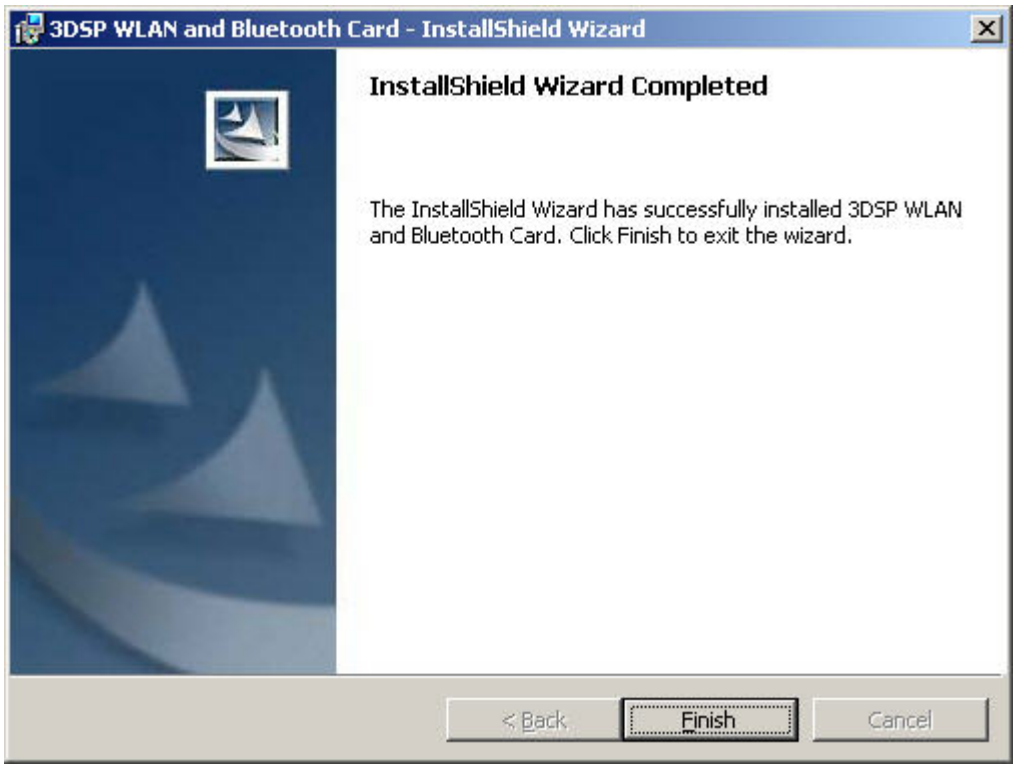
3DSP WLAN and Bluetooth Card - InstallShield Wizard
Program Maintenance
Modify, repair, or remove the program.
Modify
Change which program features are installed. This option displays the Custom Selection dialog in which you can change the way features are installed.
Repair
Repair installation errors in the program. This option fixes missing or corrupt files, shortcuts, and registry entries.
Remove
Remove 3DSP WLAN and Bluetooth Card from your computer.
InstallShield
< Back
Next >
Cancel

7.3 System will ask you again for sure you want to remove it. Click "Continue" for remove the program.


3DSP WLAN and Bluetooth Card - InstallShield Wizard
Remove the Program
Please stop all Bluetooth and Wireless LAN traffic and close related applications before Continue.
Click Continue to remove 3DSP WLAN and Bluetooth Card from your computer. After removal, this program will no longer be available for use.
If you want to review or change any settings, click Back.
InstallShield
< Back
Continue
Cancel

7.4 Finish removes the program. Please fallow the same method to remove the

IVT BlueSoleil for clean your system.


3DSP WLAN and Bluetooth Card - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed 3DSP WLAN and Bluetooth Card. Click Finish to exit the wizard.
< Back
Finish
Cancel

8. Troubleshooting

This section provides solutions to problems that may occur when trying to use the STA-PB-A0031 802.11b/g and Bluetooth v2.0 + EDR Combo PCI Module.

Q1. The computer does not recognize the STA-PB-A0031 802.11 b/g and Bluetooth v2.0 + EDR Combo PCI Card.

A1. Shut down your PC. Verify that the Wireless PCI module is properly inserted into the computer's PCI slot. Then restart your PC. If the problem still exists, please reinstall the driver.

Q2. The computer with the STA-PB-A0031 802.11 b/g and Bluetooth v2.0 + EDR Combo PCI module is unable to connect to the wireless network.

*A2.1 In Infrastructure mode, make sure that the exact same Network Name (**SSID**) exists on the Wireless PCI module Site Survey Screen and on the Access Point settings screen.*

*A2.2 In Peer-to-Peer mode, all computers in the network must have the exact same Network Name (**SSID**).*

A2.3 On the Connection Profile Screen, verify that the Wireless Mode is set correctly on all computers. It must be Access Point if an Access Point is used or Peer-to-Peer if an Access Point is not used.

A2.4 If Enable Encryption is checked, verify that the encryption keys entered in your profile are the same as the encryption keys on the other network computers.

Q3. The STA-PB-A0031 802.11 b/g and Bluetooth v2.0 + EDR Combo PCI module are draining my battery's life.

A3. Any wireless adapter will shorten your battery's life to some extent. Heavy network activity (Transmitting and receiving lots of data) will drain your battery much more than if the PCI card is in idle mode. To get the best energy efficiency, go to the Connection Profile Screen and check ***Enable Power Saving.***

Q4. When I want to install a new version of the software, I have to uninstall the older version. But when I do it, it always asks me for the location of the wlcard50.sys file.

A previous installation did not cleanly remove its driver and INF file. Click 'Cancel' to allow the current uninstallation to complete. Then do the following steps to remove any leftover INF file(s):

A4.1 Open a My Computer view of the files in your Windows \INF folder.

- *This folder is hidden when Windows is installed. To make it visible, click on the \Windows directory, and then select "Folder Options…" from the "Tools" menu. Select the "View" tab, select "Show hidden files and folders", and click "OK". Then click on the INF folder to see the contents.*

A4.2 Make a backup copy of the INF folder before continuing, and follow the procedure very carefully. Your system may become unusable if you delete INF files for devices other than the 3DSP Wireless LAN.

*A4.3 Click the "Search" button in the toolbar, and select "All files and folders". Enter *.INF for the file name, and "3d5b" for the text to search for in the file, and then click "Search".*

A4.4 For all matching files found, delete both the .INF and the corresponding PNF files. Repeat for all ****.INF*** *files that are found to contain "3d5b". For example, if oem6.inf is found to contain "3d5b", delete oem6.inf and oem6.pnf.*

A4.5 Reboot the machine and follow the normal installation procedure.

Q6. I upgrade my driver from V2.1 to V2.2 and use 2.2 version's uninstallation

shortcut to uninstall driver and utilities, but c:\Program Files\3DSP folder still exists after uninstallation.

A6. If you use v2.2's 3DSP Wireless LAN uninstallation shortcut or running setup.exe to uninstall and your machine has the previous released v2.1CD installed, a wlancfgdlg.ico and its 3DSP folder will exist after uninstallation. You can manually remove 3DSP folder under program files after the driver uninstallation.

This problem will not exist if you use v2.2CD and later version to upgrade or remove programs.

If your machine has the previously released version 2.1 installed, it is recommended to use Add\Remove Programs to uninstall the driver and manually remove c:\program files\3DSP folder before upgrading to version 2.2. You don't need to do this step in the future driver upgrading.

Q7. My PC is Microsoft Windows XP SP2, why I can't make connection with the AP Router which encryption is WPA2-AES or WPA2-TKIP?

A7. It's because the Microsoft XP SP2 original version is not support the Wireless WPA2. It needs a hotfix pack (KB903357) to solve this problem. In the driver install CD, there are the hotfix files in the folder (Microsoft WPA2 hotfix for XP Service Pack2). We put the English, Simple Chinese and Traditional Chinese version on it. If your environment is different languages, please download it form Microsoft and install.

9. Specifications

WLAN Spec	IEEE 802.11b/g
Transmit Power	13 dBm to 17 dBm
Sensitivity	-74dBm@54Mbps, -85dBm@11Mbps
Frequency Channel	14
Modulation	802.11g: OFDM / 802.11b: DSSS
Security Features	WEP, WPA, AES, TKIP, WPA2
WEP Key Bits	64 / 128 bit
Protocol	TCP/IP
Bluetooth Spec	Bluetooth v1.2 and v2.0 + EDR
Transmit Power	≦20dBm
Sensitivity	3DH5@BER=1%%, -76dBm；2DH5@BER=1%%, -90dBm；GFSK@BER=0.1%, -88dBm
Frequency Channel	79
Modulation	DQPSK, D8PSK, GFSK
Profile	SPP, DUN,HID, HSP, A2DP, OPP, SYN, LAN, PAN, FAX, FTP, BIP
Operating Temperature	32˚F to 131˚F (0˚ C to 55˚ C)
Storage Temperature	04˚F to 185˚F (-20˚ C to 85˚ C)
Operating Humidity	10% to 85%, Non-Condensing
Storage Humidity	5% to 90%, Non-Condensing
Interface Standard	PCI
Power	DC: 3.3V, Normal 320mA / Peak 500mA
Certifications	CE, FCC Class B, Wi-Fi Certification(802.11b/g), BQB , WHQL: Vista 32-bit, Vista-64bit, XP, 2000

10. Contact Information

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